

GIOVANNI BENFARI

MD, PhD, FESC | ESC ID: 469511

PROFESSIONAL PROFILE

Cardiologist and Associate Professor, Section of Cardiology, Department of Medicine, University of Verona, Italy. Research Collaborator, Department of Cardiovascular Disease, Mayo Clinic, Rochester, Minnesota, USA. Director of the Residency Program in Cardiovascular Disease, University of Verona, Italy.

WORK EXPERIENCE AND RESEARCH TRAINING

- Associate Professor, Department of Medicine - Section of Cardiology, University of Verona, Verona, Italy | July 2024 - present
- Assistant Professor, Department of Medicine - Section of Cardiology, University of Verona, Verona, Italy | July 2021 - June 2024
- Research Collaborator, Department of Cardiovascular Disease, Mayo Clinic, Rochester, Minnesota, USA | March 2017 - present
- Cardiologist, Department of Medicine - Section of Cardiology, University of Verona, Verona, Italy | August 2018 - present
- PhD in Cardiovascular Science, University of Verona, Italy | October 2017 - July 2021
- Research Fellow, Department of Cardiovascular Disease, Mayo Clinic, Rochester, Minnesota, USA | October 2015 - March 2017
- Cardiology Resident, University of Verona, Section of Cardiology, Verona, Italy | August 2013 - August 2018

EDUCATION

- Postgraduate School of Cardiovascular Disease, University of Verona, Italy | 2018
Final grade: 70/70 cum laude
- Degree in Medicine and Surgery, University of Verona, Italy | 2012
Final grade: 110/110 cum laude

CLINICAL ACTIVITIES

Board-certified in echocardiography; clinical practice at the University of Verona includes:

- Transthoracic (TTE) and transesophageal (TEE) echocardiography laboratory
- Stress echocardiography
- Heart failure outpatient clinic

SCIENTIFIC AND PROFESSIONAL MEMBERSHIPS

- Fellow of the Italian Society of Cardiology (FISC)
- Fellow of the European Society of Cardiology (FESC)
- European Association of Cardiovascular Imaging (EACVI)
- Member of ARCA - Società Regionale dei Cardiologi Ambulatoriali (Veneto coordinating nucleus)
- Italian Society of Cardiology (SIC)

LANGUAGES

Language	Listening	Reading	Spoken interaction	Spoken production	Writing
English	C1	C1	C1	C1	C1

Mother tongue: Italian. Levels according to the Common European Framework of Reference for Languages.

SCIENTIFIC PUBLICATIONS

Publications in international journals. Full list reproduced from the original CV; article titles and bibliographic details are retained in their publication language.

1. Butcher SC, Essayagh B, Steyerberg EW, Benfari G, Antoine C, Grigioni F, Le Tourneau T, Roussel JC, van Wijngaarden A, Marsan NA, Tribouilloy C, Rusinaru D, Hochstadt A, Topilsky Y, Michelena HI, Delgado V, Bax JJ, Enriquez-Sarano M. Factors influencing post-surgical survival in degenerative mitral regurgitation. Eur Heart J. 2023 Jan 26;ehad004. doi: 10.1093/eurheartj/ehad004. Epub ahead of print. PMID: 36702625.
2. Benfari G, Sorajja P, Pedrazzini G, Taramasso M, Gavazzoni M, Biasco L, Essayagh B, Grigioni F, Bae R, Tribouilloy C, Vanoverschelde JL, Michelena H, Bapat VN, Vancraynest D, Klersy C, Curti M, Thapa P, Enriquez-Sarano M. Association of transcatheter edge-to-edge repair with improved survival in older patients with severe, symptomatic degenerative mitral regurgitation. Eur Heart J. 2022 May 1;43(17):1626-1635. doi: 10.1093/eurheartj/ehab910. PMID: 35090000.
3. B. Essayagh, G. Benfari, C. Antoine, F. Grigioni, Thierry Le Tourneau, Jean-Christian Roussel, Jeroen J. Bax, Victoria Delgado, Nina Ajmone Marsan, Aniek van Wijngaarden, Christophe Tribouilloy, Dan Rusinaru, Aviram Hochstadt, Yan Topilsky, Prabin Thapa, Hector I. Michelena and Maurice Enriquez-Sarano . The MIDA-Q Mortality Risk Score: A Quantitative Prognostic Tool for the Mitral Valve Prolapse Spectrum. Circulation, 27 Dec 2022https://doi.org/10.1161/CIRCULATIONAHA.122.062612
4. Roselli C, Yu M, Nauffal V, Georges A, Yang Q, Love K, Weng LC, Dellling FN, Maurya SR, Schrölkamp M, Tfelt-Hansen J, Hagège A, Jeunemaitre X, Debette S, Amouyel P, Guan W, Muehlschlegel JD, Body SC, Shah S, Samad Z, Kyryachenko S, Haynes C, Rienstra M, Le Tourneau T, Probst V, Roussel R, Wijdh-

- Den Hamer IJ, Siland JE, Knowlton KU, Jacques Schott J, Levine RA, Benjamin EJ, Vasan RS, Horne BD, Muhlestein JB, Benfari G, Enriquez- Sarano M, Natale A, Mohanty S, Trivedi C, Shoemaker MB, Yoneda ZT, Wells QS, Baker MT, Farber-Eger E, Michelena HI, Lundby A, Norris RA, Slaugenhaupt SA, Dina C, Lubitz SA, Bouatia-Naji N, Ellinor PT, Milan DJ. Genome-wide association study reveals novel genetic loci: a new polygenic risk score for mitral valve prolapse. *Eur Heart J*. 2022 May 1;43(17):1668-1680. doi: 10.1093/eurheartj/ehac049. PMID: 35245370.
5. Malagoli A, Rossi L, Zanni A, Sticozzi C, Piepoli MF, Benfari G. Quantified mitral regurgitation and left atrial function in heart failure with reduced ejection fraction: interplay and outcome implications. *Eur J Heart Fail*. 2022 Apr;24(4):694-702. doi: 10.1002/ehf.2429. Epub 2022 Jan
 6. Essayagh B, Benfari G, Antoine C, Maalouf J, Pislaru S, Thapa P, Michelena HI, Enriquez- Sarano M. Incremental Prognosis by Left Atrial Functional Assessment: The Left Atrial Coupling Index in Patients With Floppy Mitral Valves. *J Am Heart Assoc*. 2022 May 3;11(9):e024814. doi: 10.1161/JAHA.121.024814. Epub 2022 Apr
 7. Mantovani A, Byrne CD, Benfari G, Bonapace S, Simon TG, Targher G. Risk of Heart Failure in Patients With Nonalcoholic Fatty Liver Disease: JACC Review Topic of the Week. *J Am Coll Cardiol*. 2022 Jan 18;79(2):180-191. doi: 10.1016/j.jacc.2021.11.007. PMID: 35027111.
 8. Rubino F, Scarsini R, Piccoli A, San Biagio L, Tropea I, Pighi M, Prati D, Tavella D, Pesarini G, Benfari G, Onorati F, Gottin L, Faggian G, Ribichini FL. Comparative Prognostic Value of Parameters of Pulsatile Right Ventricular Afterload in Patients With Advanced Heart Failure Awaiting Heart Transplantation. *Am J Cardiol*. 2022 Sep 12:S0002-9149(22)00840-2. doi: 10.1016/j.amjcard.2022.08.010. Epub ahead of print. PMID: 36109208.
 9. Pastore MC, Mandoli GE, Giannoni A, Benfari G, Dini FL et al; Collaborators: DISCOVER-ARNI Collaborators, Rosa G, Magnesa M, Mazzeo P, De Carli G, Bellino M, Iuliano G, Casciano O, Binno S, Canepa M, Tondi S, Ciccoira M, Mega S. Sacubitril/valsartan reduces indications for arrhythmic primary prevention in heart failure with reduced ejection fraction: insights from DISCOVER-ARNI, a multicenter Italian register. *Eur Heart J Open*. 2021 Dec 21;2(1):oeab046. doi: 10.1093/ehjopen/oeab046. PMID: 35919657; PMCID: PMC9242049.
 10. Setti M, Nistri S, Rossi A, Mantovani F, Ribichini FL, Benfari G. Unequivocal interpretation of dobutamine stress echocardiography in low-flow, low-gradient aortic stenosis by right parasternal view. *Echocardiography*. 2022 Jan;39(1):136-139. doi: 10.1111/echo.15277. Epub 2021 Dec 18. PMID: 34923669.
 11. Mandoli GE, Pastore MC, Benfari G, Setti M, Nistor D, D'Ascenzi F, Focardi M, Baccani B, Patti G, Valente S, Mondillo S, Cameli M. New echocardiographic indices of shift to biventricular failure to optimize risk stratification of chronic heart failure. *ESC Heart Fail*. 2022 Feb;9(1):476-
 12. Ficial B, Corsini I, Clemente M, Cappelleri A, Remaschi G, Quer L, Urbani G, Sandrini C, Biban P, Dani C, Benfari G. Feasibility, Reproducibility and Reference Ranges of Left Atrial Strain in Preterm and Term Neonates in the First 48 h of Life. *Diagnostics (Basel)*. 2022 Jan 29;12(2):350. doi: 10.3390/diagnostics12020350. PMID: 35204441; PMCID: PMC8871374.
 13. Benfari G, Cavalcante JL, Enriquez-Sarano M. Multimodality imaging in functional mitral regurgitation: Valvular disease and the chamber remodeling quantification. *Int J Cardiol*. 2022 Feb 15;349:106-108. doi: 10.1016/j.ijcard.2021.11.065. Epub 2021 Nov 30. PMID: 34861321.
 14. Mantovani F, Benfari G, Barbieri A, Manca F, Guiducci V, Navazio A, Clavel MA. Case Report: Posterior Thoracic Window in the Presence of Pleural Effusion in Critical Care Medicine: One More Chance to Image the Aortic Valve. *Front Cardiovasc Med*. 2022 Jun 23;9:907168. doi: 10.3389/fcvm.2022.907168. PMID: 35811731; PMCID: PMC9260961.
 15. Lisi M, Mandoli GE, Cameli M, Pastore MC, Righini FM, Benfari G, Rubboli A, D'Ascenzi F, Focardi M, Tsioulpas C, Bernazzali S, Maccherini M, Lisi E, Lindqvist P, Valente S, Mondillo S, Henein MY. Left atrial strain by speckle tracking predicts atrial fibrosis in patients undergoing heart transplantation. *Eur Heart J Cardiovasc Imaging*. 2022 Jun 1;23(6):829-835. doi: 10.1093/ehjci/jeab106. PMID: 34118154.
 16. Stricagnoli M, Sciacaluga C, Mandoli GE, Rizzo L, Sisti N, Aboumarie HS, Benfari G, Maritan L, Tsioulpas C, Bernazzali S, Maccherini M, Natali BM, Focardi M, D'Ascenzi F, Lisi M, Valente S, Mondillo S, Cameli M. Clinical, echocardiographic and hemodynamic predictors of right heart failure after LVAD placement. *Int J Cardiovasc Imaging*. 2022 Mar;38(3):561-570. doi: 10.1007/s10554-021-02433-7. Epub 2021 Oct 18. PMID: 34661853; PMCID: PMC8926966.
 17. Carpenito M, Fanti D, Mega S, Benfari G, Bono MC, Rossi A, Ribichini FL, Grigioni F. The Central Role of Left Atrium in Heart Failure. *Front Cardiovasc Med*. 2021 Aug 13;8:704762. doi: 10.3389/fcvm.2021.704762. eCollection 2021.
 18. Essayagh B, Mantovani F, Benfari G, Enriquez-Sarano M. Of Causality and Inferences: Mitral Annular Disjunction and Its Consequences-Reply. *J Am Soc Echocardiogr*. 2022 Feb;35(2):239-
 19. Maffei C, Inciardi RM, Khan MS, Tafciu E, Bergamini C, Benfari G, Setti M, Ribichini FL, Ciccoira M, Butler J, Rossi A. Determinants of exercise intolerance symptoms considered non-specific for heart failure in patients with stage A and B: role of the left atrium in the transition phase to overt heart failure. *Int J Cardiovasc Imaging*. 2021 Aug 30. doi: 10.1007/s10554-021-02375-0. Online ahead of print. PMID: 34460024
 20. E. Picano et al. Stress Echo 2030: The Novel ABCDE-(FGLPR) Protocol to Define the Future of Imaging. *J Clin Med* 2021 Aug 17;10(16):3641. doi: 10.3390/jcm10163641.
 21. D'Andrea A, Iardi F, D'Ascenzi F, Bandera F, Benfari G, Esposito R, Malagoli A, Mandoli GE, Santoro C, Russo V, D'Alto M, Cameli M. Impaired myocardial work efficiency in heart failure with preserved ejection fraction. *Eur Heart J Cardiovasc Imaging*. 2021 Aug 19;jeab153. doi: 10.1093/ehjci/jeab153. Online ahead of print.
 22. Enriquez-Sarano M, Benfari G, Messika-Zeitoun D, Grigioni F, Michelena HI. Functional mitral regurgitation: a proportionate or disproportionate focus of attention? *Eur J Heart Fail*. 2021 Aug
 23. Bartolacelli Y, Barbieri A, Antonini-Canterin F, Pepi M, Monte IP, Trocino G, Barchitta A, Cresti A, Miceli S, Petrella L, Benedetto F, Zito C, Benfari G, et al. On Behalf Of The Stress Echo Study Group Of The Italian Society Of Echocardiography And Cardiovascular Imaging. Imaging Quality Control, Methodology Harmonization and Clinical Data Management in Stress Echo 2030. *J Clin Med*. 2021 Jul 7;10(14):3020. doi: 10.3390/jcm10143020.
 24. Benfari G, Antoine C, Essayagh B, Batista R, Maalouf J, Rossi A, Grigioni F, Thapa P, Michelena HI, Enriquez-Sarano M. Functional Mitral Regurgitation Outcome and Grading in Heart Failure With Reduced Ejection Fraction. *JACC Cardiovasc Imaging* 2021 Jul 7;S1936-878X(21)00437-X. doi: 10.1016/j.jcmg.2021.05.017. Online ahead of print.
 25. Annachiara Benini, Giovanni Benfari, Mara Pilati, Giovanni Battista Luciani, Flavio Luciano Ribichini, Maria Antonia Prioli. Bicuspid Aortic Valve Disease from Infancy to Older Age: A 25- Year Experience from an Italian Referral Center. *iovasc Echogr Jan-Mar* 2021;31(1):29-34. doi: 10.4103/jcecho.jcecho_115_20. Epub 2021 May 21.
 26. PMID: 35014120.
 27. Lisi M, Mandoli GE, Cameli M, Pastore MC, Righini FM, Benfari G, Rubboli A, D'Ascenzi F, Focardi M, Tsioulpas C, Bernazzali S, Maccherini M, Lisi E, Lindqvist P, Valente S, Mondillo S, Henein MY. Left atrial strain by speckle tracking predicts atrial fibrosis in patients undergoing heart transplantation. *Eur Heart J Cardiovasc Imaging*. 2021 Jun 12;jeab106. doi: 10.1093/ehjci/jeab106. Online ahead of print.
 28. Malagoli A, Albini A, Mandoli GE, Baggiano A, Vinco G, Bandera F, D'Andrea A, Esposito R, D'Ascenzi F, Sorrentino R, Santoro C, Benfari G, Contorni F, Cameli M; Working group of Echocardiography of Italian Society of Cardiology (SIC). Multimodality imaging of the ischemic right ventricle: an overview and proposal of a diagnostic algorithm. *Int J Cardiovasc Imaging*. 2021 Jun 10. doi: 10.1007/s10554-021-02309-w. Online ahead of print.
 29. Mandoli GE, D'Ascenzi F, Vinco G, Benfari G, Ricci F, Focardi M, Cavigli L, Pastore MC, Sisti N, De Vivo O, Santoro C, Mondillo S, Cameli M. Novel Approaches in Cardiac Imaging for Non-invasive Assessment of Left Heart Myocardial Fibrosis. *Front Cardiovasc Med*. 2021 Apr 15;8:614235. doi: 10.3389/fcvm.2021.614235. eCollection 2021.
 30. Vinciguerra M, Grigioni F, Romiti S, Benfari G, Rose D, Spadaccio C, Cimino S, De Bellis A, Greco E. Ischemic Mitral Regurgitation: A Multifaceted Syndrome with Evolving Therapies. *Biomedicines*. 2021 Apr 21;9(5):447.

31. Malagoli A, Rossi L, Zanni A, Sticozzi C, Piepoli MF, Benfari G Refining the Role of Left Atrial Strain in Heart Failure with Reduced Ejection Fraction. *J Am Soc Echocardiogr.* 2021 Jul;34(7):804-805. doi: 10.1016/j.echo.2021.02.010. Epub 2021 Mar 10.
32. Rossi A, Barbieri A, Benfari G, Gaibazzi N, Erlicher A, Mureddu G, Frattini S, Faden G, Manicardi M, Beraldi M, Agostini F, Lazzarini V, Moreo A, Luigi Temporelli P, Magni G, Pressman G, Faggiano P. Heart valve calcification and cardiac hemodynamics. *Echocardiography.* 2021 Apr;38(4):525-530. doi: 10.1111/echo.14994. Epub 2021 Mar 11.
33. Esposito R, Santoro C, Mandoli GE, Cuomo V, Sorrentino R, La Mura L, Pastore MC, Bandera F, D'Ascenzi F, Malagoli A, Benfari G, D'Andrea A, Cameli M. Cardiac Imaging in Anderson- Fabry Disease: Past, Present and Future. *J Clin Med.* 2021 May 6;10(9):1994. doi: 10.3390/jcm10091994.
34. Giovanni Benfari, Benjamin Essayagh , Stefano Nistri, Joseph Maalouf, Andrea Rossi , Prabin Thapa, Hector I. Michelena ,Maurice Enriquez-Sarano , MD Left Atrial Volumetric/Mechanical Coupling Index. A Novel Predictor of Outcome in Heart Failure With Reduced Ejection Fraction. *Circulation Cardiovascular Imaging*; published 19 Jan 2021.
35. Benfari G, Nistri S, Marin F, Cerrito LF, Maritan L, Tafciu E, Franzese I, Onorati F, Setti M, Pighi M, Rossi A, Ribichini FL. Excess Mortality Associated with Progression Rate in Asymptomatic Aortic Valve Stenosis. *J Am Soc Echocardiogr.* 2020 Nov 28;S0894-7317(20)30770-7. doi:10.1016/j.echo.2020.11.015.
36. Yang LT, Benfari G, Eleid M, Scott CG, Nkomo VT, Pellikka PA, Anavekar NS, Enriquez-Sarano M, Michelena HI. Contemporary differences between bicuspid and tricuspid aortic valve in chronic aortic regurgitation. *Heart.* 2020 Oct 27;heartjnl-2020-317466. doi: 10.1136/heartjnl-2020-317466. Online ahead of print.
37. Benfari G, Nistri S, Cerrito LF, Maritan L, Tafciu E, Setti M, Bursi F, Tadiello E, De Manna ND, Rossi A, Ribichini FL. Usefulness of the Right Parasternal Echocardiographic View to Improve the Hemodynamic Assessment After Valve Replacement for Aortic Stenosis. *Am J Cardiol.* 2020 Dec 3:S0002-9149(20)31290-X. doi: 10.1016/j.amjcard.2020.11.028.
38. G Benfari, M Setti MD , S Nistri, D Fanti, C Maffei, E Tafciu, M Pighi, MA Cicoira, FL Ribichini, A Rossi. Relevance of Functional Mitral Regurgitation in Aortic Valve Stenosis. *American Journal of Cardiology.* PII: S0002-9149(20)30954-1. DOI: <https://doi.org/10.1016/j.amjcard.2020.09.016>
39. Cerrito LF, Maffei C, Inciardi RM, Tafciu E, Benfari G, Bergamini C, Ribichini FL, Rossi A. How to incorporate left atrial strain in the diagnostic algorithm of left ventricular diastolic dysfunction. *Int J Cardiovasc Imaging.* 2020 Oct 31. doi: 10.1007/s10554-020-02070-6.
40. Tafciu E, Mandoli GE, Santoro C, Setti M, d'Andrea A, Esposito R, Bandera F, Evola V, Malagoli A, Cameli M, Benfari G; Working Group of Echocardiography of the Italian Society of Cardiology. The progression rate of aortic stenosis: key to tailoring the management and potential target for treatment. *J Cardiovasc Med (Hagerstown).* 2020 Oct 29. doi: 0.2459/JCM.0000000000001126.
41. Cameli M, Miglioranza MH, Magne J, Mandoli GE, Benfari G, Ancona R, Sibilio G, Reskovic Luksic V, Dejan D, Griseli L, Van De Heyning CM, Mortelmans P, Michalski B, Kupczynska K, Di Giannuario G, Devito F, Dulgheru R, Ilardi F, Salustri A, Abushahba G, Morrone D, Fabiani I, Penicka M, Katbeh A, Sammarco G, Esposito R, Santoro C, Pastore MC, Comenale Pinto S, Kalinin A, Pičkure Ž, Ažman Juvan K, Zupan Mežnar A, Coisne A, Coppin A, Opris MM, Nistor DO, Paakkanen R, Biering-Sørensen T, Olsen FJ, Lapinskas T, Vaškelytė JJ, Galian-Gay L, Casas G, Motoc AI, Papadopoulos CH, Loizos S, Ágoston G, Szabó I, Hristova K, Tsonev SN, Galli E, Vinereanu D, Mihaila Baldea S, Muraru D, Mondillo S, Donal E, Galderisi M, Cosyns B, Edvardsen T, Popescu BA. Multicentric Atrial Strain COMparison between Two Different Modalities: MASCOT HIT Study. *Diagnostics.* 2020 Nov 13;10(11):946. doi: 10.3390/diagnostics10110946.
42. Malagoli A, Fanti D, Albini A, Rossi A, Ribichini FL, Benfari G. Echocardiographic Strain Imaging in Coronary Artery Disease: The Added Value of a Quantitative Approach. *Cardiol Clin.* 2020 Nov;38(4):517-526. doi: 10.1016/j.ccl.2020.06.005. Epub 2020 Sep 17.
43. Mandoli GE, Pastore MC, Benfari G, Bisleri G, Maccherini M, Lisi G, Cameli P, Lisi M, Dokollari A, Carrucola C, Vigna M, Montesi G, Valente S, Mondillo S, Cameli M. Left atrial strain as a pre-operative prognostic marker for patients with severe mitral regurgitation. *Int J Cardiol.* 2020 Sep 10;S0167-5273(20)33743-8. doi: 10.1016/j.ijcard.2020.09.009. Online ahead of print.
44. Setti M, Benfari G, Mele D, Rossi A, Ballo P, Galderisi M, Henein M, Nistri S. Discrepancies in Assessing Diastolic Function in Pre-Clinical Heart Failure Using Different Algorithms-A Primary Care Study. *Diagnostics.* 2020 Oct 20;10(10):850. doi: 10.3390/diagnostics10100850.
45. D'Ascenzi F, Valentini F, Anselmi F, Cavigli L, Bandera F, Benfari G, D'Andrea A, Di Salvo G, Esposito R, Evola V, Malagoli A, Elena Mandoli G, Santoro C, Galderisi M, Mondillo S, Cameli M; Working Group of Echocardiography of the Italian Society of Cardiology (SIC). Bicuspid aortic valve and sports: From the echocardiographic evaluation to the eligibility for sports competition. *Scand J Med Sci Sports.* 2020 Dec 1. doi: 10.1111/sms.13895.
46. Barbieri A, Antonini-Canterin F, Pepi M, Monte IP, Trocino G, Barchitta A, Ciampi Q, Cresti A, Miceli S, Petrella L, Benedetto F, Zito C, Benfari G, Bursi F, Malagoli A, Bartolacelli Y, Mantovani F, Clavel MA. Discordant Echocardiographic Grading in Low Gradient Aortic Stenosis (DEGAS Study) From the Italian Society of Echocardiography and Cardiovascular Imaging Research Network: Rationale and Study Design. *J Cardiovasc Echogr.* 2020 Apr-Jun;30(2):52-
47. Sciacaluga C, Mandoli GE, Sisti N, Natali MB, Ibrahim A, Menci D, D'Errico A, Donati G, Benfari G, Valente S, Bernazzali S, Maccherini M, Mondillo S, Cameli M, Focardi M. Detection of cardiac allograft vasculopathy by multi-layer left ventricular longitudinal strain in heart transplant recipients. *Int J Cardiovasc Imaging.* 2021 Jan 13. doi: 10.1007/s10554-020-02147-2. Online ahead of print.
48. Benjamin Essayagh, Clemence Antoine, Giovanni Benfari, Joseph Maalouf, Hector I. Michelena, Juan A. Crestanello, Prabin Thapa, Jean-François Avierinos , and Maurice Enriquez-Sarano. Functional tricuspid regurgitation of degenerative mitral valve disease: a crucial determinant of survival. *European Heart Journal* (2020) 41, 1918–1929
49. Giovanni Benfari, F Mantovani, S Romero-Brufau, M Setti, A Rossi, FL Ribichini, S Nistri and Marie-Annick Clavel. The right parasternal window: when Doppler-beam alignment may be life- saving in patients with aortic valve stenosis. *J Cardiovasc Med* 2020, 21:831–834
50. GE Mandoli, MC Pastore, Giovanni Benfari, G Bisleri, M Maccherini, G Lisi, Paolo Cameli, M Lisi, A Dokollari, C Carrucola, M Vigna, G Montesi, S Valente, S Mondillo, M Cameli. Left atrial strain as a pre-operative prognostic marker for patients with severe mitral regurgitation. *International Journal of Cardiology* <https://doi.org/10.1016/j.ijcard.2020.09.009>.
51. Caterina Maffei, Riccardo Maria Inciardi, Giovanni Benfari, Corinna Bergamini, Flavio Luciano Ribichini, Mariantonietta Cicoira and Andrea Rossi. Mitral regurgitation and dyspnoea: the expanding role of mitral effective regurgitant orifice among un-selected patients. *J Cardiovasc Med* 2020, 21:503–509
52. Li-Tan Yang, So Woon Ahn, Zhenhua Li, Giovanni Benfari, Rekha Mankad, Masaaki Takeuchi, Robert A. Levine, Maurice Enriquez-Sarano. Mitral Valve Prolapse Patients with Less than Moderate Mitral Regurgitation Exhibit Early Cardiac Chamber Remodeling. *JASE* 2020. <https://doi.org/10.1016/j.echo.2020.01.016>
53. Riccardo M. Inciardi, Andrea Rossi, Corinna Bergamini, Giovanni Benfari, Caterina Maffei, Carmen Greco, Andrea Drago, Marco Guazzi, Flavio L. Ribichini, and Mariantonietta Cicoira. Mitral regurgitation, left atrial structural and functional remodelling and the effect on pulmonary haemodynamics. *European Journal of Heart Failure* (2020) 22, 499–506
54. MC Pastore, GE Mandoli, H Soliman Aboumarie, C Santoro, F Bandera, A D'Andrea, G Benfari, R Esposito V Evola, R Sorrentino, P Cameli, S Valente, S Mondillo, M Galderisi, M Cameli. Basic and advanced echocardiography in advanced heart failure: an overview. *Heart Failure Reviews* (2020). <https://doi.org/10.1007/s10741-019-09865-3>
55. A Pacchioni, J Ferro, G Pesarini, R Mantovani, A Mugnolo, M Bellamoli, C Penzo, G Marchese, D Benedetto, R Turri, A Fede, Giovanni Benfari, S Saccà, F Ribichini, F Versaci, B Reimers. The Activated Clotting Time Paradox. Relationship Between Activated Clotting Time and Occlusion of the Radial Artery When Used as Vascular Access for Percutaneous Coronary Procedures. *Circulation Cardiovascular intervention*, 2019;12:e008045. DOI:10.1161/CIRCINTERVENTIONS.119.008045

56. Maurice Enriquez-Sarano, David Messika-Zeitoun, Yan Topilsky, Christophe Tribouilloy, Giovanni Benfari, Hector Michelena. Tricuspid regurgitation is a public health crisis. *Progress in Cardiovascular Diseases* 62 (2019) 447–451.
57. Taramasso M, Benfari G, van der Bijl P, Alessandrini H, Attinger-Toller A, Biasco L, Lurz P, Braun D, Brochet E, Connelly KA, de Buijn S, Denti P, Deuschl F, Estevez-Loureiro R, Fam N, Frerker C, Gavazzoni M, Hausleiter J, Ho E, Juliard JM, Kaple R, Besler C, Kodali S, Kreidel F, Kuck KH, Latib A, Lauten A, Monivas V, Mehr M, Muntané-Carol G, Nazif T, Nickening G, Pedrazzini G, Philippon F, Pozzoli A, Praz F, Puri R, Rodés-Cabau J, Schäfer U, Schofer J, Sievert H, Tang GHL, Thiele H, Topilsky Y, Rommel KP, Delgado V, Vahanian A, Von Bardeleben RS, Webb JG, Weber M, Windecker S, Winkel M, Zuber M, Leon MB, Hahn RT, Bax JJ, Enriquez-Sarano M, Maisano F. Transcatheter Versus Medical Treatment of Patients With Symptomatic Severe Tricuspid Regurgitation. *JACC* 2019. <https://doi.org/10.1016/j.jacc.2019.09.028>
58. Deluting balloon for the treatment of patients with coronary artery disease: Current perspectives. Mattia Lunardi, Carlo Zivelonghi, Floris S. van den Brink, Matteo Ghione, Giulia Vinco, Giovanni Benfari, Roberto Scarsini, Flavio Ribichini, Pierfrancesco Agostoni. *Cardiovascular Revascularization Medicine* 19 (2018) 215–220
59. Essayagh B, Sabbag A, Antoine C, Benfari G, Yang LT, Maalouf J, Asirvatham S, Michelena H, Enriquez-Sarano M. Presentation and Outcome of Arrhythmic Mitral Valve Prolapse. *J Am Coll Cardiol*. 2020 Aug 11;76(6):637-649. doi: 10.1016/j.jacc.2020.06.029.
60. Barbieri A, Benfari G, Giubertoni E, Manicardi M, Bursi F, Rossi A, Maritan L, Venturi G, Boriani G. Degree of left ventricular dilatation at end-diastole: Correlation and prognostic utility of quantitative volumes by 2D-echocardiography versus linear dimensions in patients with asymptomatic aortic regurgitation. *Echocardiography*. 2020 Aug 5. doi: 10.1111/echo.14815. Online ahead of print.
61. doi: 10.4103/jecho.jecho_68_20. Epub 2020 Aug 17.
62. Giovanni Benfari, W L Miller, C Antoine, A Rossi, G Lin, MD, J K Oh, V L Roger, P Thapa, M Enriquez-Sarano. Diastolic determinants of excess mortality in heart failure with reduced ejection fraction. *JACC-heart failure*, 2019. DOI: 10.1016/j.jchf.2019.04.024
63. Dziadzko V, Dziadzko M, Medina-Inojosa JR, Benfari G, Michelena HI, Crestanello JA, Maalouf J, Thapa P, Enriquez-Sarano M. Cause and mechanism of isolated mitral regurgitation in the community: clinical context and outcome. *European Heart Journal*, 2019. doi: 10.1093/eurheartj/ehz314.
64. Giovanni Benfari, C Antoine, W Miller, P Thapa, Y Topilsky, A Rossi, MD, H I Michelena, S Pislaru, M Enriquez-Sarano. Excess mortality associated with functional Tricuspid Regurgitation complicating Heart failure with reduced ejection fraction *Circulation*, 2019 DOI: 10.1161/CIRCULATIONAHA.118.038946
65. Giovanni Benfari, M. Noni, F. Onorati, LF. Cerrito, M. Pernigo, G. Vinco, M. Cameli, GE. Mandoli, G. Borio, G. Geremia, C. Zivelonghi, R. Abbasciano, G. Mazzali, M. Zamboni, G. Faggian, A. Rossi, FL. Ribichini. Effects of Aortic Valve Replacement in Patients with Aortic Stenosis on postoperative Left Ventricular Diastolic Function. *American Journal of Cardiology*, 2019.
66. F Grigioni F, Benfari G, Vanoverschelde JL, Tribouilloy C, Avierinos JF, Bursi F, Suri RM, Guerra F, Pasquet A, Rusinaru D, Marcelli E, Theron A, Barbieri A, Michelena H, Lazam S, Szymanski C, Nkomo VT, Capucci A, Thapa P, Enriquez-Sarano M; MIDA Investigators. Long- Term Implications of Atrial Fibrillation in Patients With Degenerative Mitral Regurgitation. *JACC*, 2019; 73 (3), 264-274
67. Pighi M, Benfari Giovanni, Pesarini G, Ribichini F. Transcatheter edge-to-edge mitral valve repair: what is the measure of success? *Eur J Heart Fail*. 2019 Feb;21(2):205-207. doi: 10.1002/ehj.1405.
68. Antoine C, Benfari Giovanni, Michelena HI, Maalouf JF, Nkomo VT, Thapa P, Enriquez-Sarano M. Clinical Outcome of Degenerative Mitral Regurgitation. *Circulation*. 2018 Sep 25;138(13):1317-1326.
69. C. Zivelonghi, M. J. Suttorp MD PhD, K. Teeuwen, Jan Peter van Kuijk, Jan A.S. van der Heyden, Frank D. Eefting, Benno J. Rensing, Jurrien M. ten Berg, Giovanni Benfari, Flavio Ribichini, José P.S. Henriques, Pierfrancesco Agostoni, Clinical implications of distal vessel stenosis after successful coronary chronic total occlusion recanalization. *JACC Cardio. Intervention*.
70. Bergamini C, Benfari Giovanni, Dolci G, Torelli F, Ghiselli L, Trevisani L, Truong S, Vinco G, La Russa F, Golia G, Molino A, Rossi A, Ribichini FL. Usefulness of Left Atrial Remodeling in Predicting Cardiac Toxicity During Trastuzumab Therapy for Breast Cancer. *Am J Cardiol*. 2018 Sep 1;122(5):885-889.
71. Topilsky Y, Inojosa JM, Benfari Giovanni, Vaturi O, Maltais S, Michelena H, Mankad S, Enriquez-Sarano M. Clinical presentation and outcome of tricuspid regurgitation in patients with systolic dysfunction. *Eur Heart J*. 2018 Oct 14;39(39):3584-3592.
72. Benfari Giovanni, Grigioni F. Speckle tracking for the diagnosis of subclinical myocardial involvement in systemic sclerosis: A mandatory tool for everyday clinical practice? *Eur J Prev Cardiol*. 2018 Oct;25(15):1596-1597.
73. C. Bergamini, G. Dolci, S. Truong, L. Zanolta, Giovanni Benfari, E. Fiorio, A. Rossi, FL. Ribichini. Role of speckle tracking echocardiography in the evaluation of breast cancer patients undergoing chemotherapy: review and meta-analysis of the literature. *Cardiovascular Toxicology*, 2019 in press
74. Rattazzi M, Faggian E, Bertacco E, Buso R, Puato M, Plebani M, Zaninotto M, Condotta D, Zoppellaro G, Pagliani L, Tarantini G, Illiceto S, Covolo E, Faggian G, Onorati F, Dodonov M, Daniotti A, Pantano P, Olivari Z, Benfari Giovanni, Pauletto P. RANKL Expression Is Increased in Circulating Mononuclear Cells of Patients with Calcific Aortic Stenosis. *J Card Transl Res*. 2018 Aug;11(4):329-338. Epub 2018 May 17.
75. Marafioti V, Benfari Giovanni. Takotsubo syndrome: a neurocardiac syndrome inside the autonomic nervous system. *Heart Fail Rev*. 2018 Oct 20. doi: 10.1007/s10741-018-9748-2.
76. Inciardi R, Rossi A, Benfari Giovanni, Cicoira M. Fill in the Gaps of Secondary Mitral Regurgitation: a continuum challenge from pathophysiology to prognosis. *Curr Heart Fail Rep*. 2018 Apr;15(2):106-115.
77. Rossi A, Dini FL, Agricola E, Faggiano P, Benfari Giovanni, Temporelli PL, Cucco C, Sclesi L, Vassanelli C, Ghio S. Left atrial dilatation in systolic heart failure: a marker of poor prognosis, not just a buffer between the left ventricle and pulmonary circulation. *Journal of Echocardiography*, Feb. 2018. DOI: 10.1007/s12574-018-0373-9
78. C Antoine, MD; F Mantovani, MD, PhD; Giovanni Benfari, MD; S V. Mankad, MD; J F. Maalouf, MD; H I. Michelena, MD; Maurice Enriquez-Sarano, MD. Pathophysiology of Degenerative Mitral Regurgitation. *New 3-Dimensional Imaging Insights*. Jan 2018 doi: 10.1161/circimaging.116.005971 *Circulation Cardiovascular Imaging*.
79. Giovanni Benfari, Stefano Nistri MD PhD, Pompilio Faggiano, Marie-Annick Clavel, Caterina Maffei MD, Maurice Enriquez-Sarano, Corrado Vassanelli, Andrea Rossi. Mitral effective regurgitant orifice area predicts pulmonary artery pressure level in patients with aortic valve stenosis. *JASE* February 2018. doi.org/10.1016/j.echo.2017.12.004
80. Giovanni Benfari, Giulia Vinco, Karl Sayegh, Matthias Friedrich, Andrea Rossi. A new method to evaluate atrial hemodynamic and quantify mitral regurgitation by cardiovascular magnetic resonance: the pulmonary venous flow approach. *The Journal of Heart Valve Disease*, 2017, 26.
81. Corinna Bergamini; Giulia Dolci, Andrea Rossi; Flavia Torelli; Luca Ghiselli; Laura Trevisani; Giulia Vinco; Stella Truong; Francesca La Russa; Giorgio Golia; Annamaria Molino; Giovanni Benfari; Flavio Luciano Ribichini. Left atrial volume in patients with HER2 positive breast cancer: one step further to predict trastuzumab-related cardiotoxicity. *Clinical Cardiology*. Article DOI: 10.1002/clc.22872
82. Giovanni Benfari, A. Rossi, G. Geremia, G. Vinco, C. Zivelonghi, A. Milano, L. Gottin, F. Ribichini, F. Onorati, G. Faggian. Optimizing the role of transthoracic echocardiography to improve the cardiovascular risk stratification: the dream of subclinical coronary artery disease detection. *Minerva Medica*. *Minerva Medica* 109(1), pp. 31-40.
83. M. Pernigo, Giovanni Benfari, G. Geremia, M. Noni, G. Borio, G. Mazzali, M. Zamboni, F. Onorati, G. Faggian, C. Vassanelli. Atrial function as an independent predictor of post-operative atrial fibrillation in patients undergoing aortic valve surgery for severe aortic stenosis. *JASE*, July 2017.
84. Giovanni Benfari, MA Clavel, N Stefano, C Maffei, C Vassanelli, M Enriquez-Sarano, A Rossi. Concomitant mitral regurgitation and aortic stenosis: one step further to low-flow preserved ejection fraction aortic stenosis. *European Heart Journal of Cardiovascular Imaging*. June 2017.

85. Giovanni Benfari, AM Gori BS, A Rossi, B Papesso, C Vassanelli, GB Zito, S Nistri. Feasibility and Relevance of Right Parasternal View for Assessing Severity and Rate of Progression of Aortic Valve Stenosis in Primary Care. *International Journal of Cardiology*. April 2017.
86. Zivelonghi C, Ghione M, Benfari Giovanni, Cuman M, Fede A, Cordone S, Bellone P, Pacchioni A, Reimers B, Ribichini F. Drug Coated Balloon: long-term outcome from a real world three-center experience. *Journal of interventional Cardiology*. April 2017.
87. Bergamini C, Torelli F, Ghiselli L, Rossi A, trevisani L, Vinco G, Troung S, Benfari Giovanni, Larussa F, Golia G, Molino AM, Vassanelli C. Left ventricular end-diastolic volume as an early indicator of Trastuzumab-related cardiotoxicity in patients with HER2 positive breast cancer: results from a single-center retrospective study. *Minerva Cardioangiologica*, 11/2016.
88. A Rossi, G Zoppini, Giovanni Benfari, G Geremia, S Bonapace, E Bonora, C Vassanelli, M Enriquez-Sarano, G Targher: Mitral regurgitation and increased risk of all-cause and cardiovascular mortality in patients with type 2 diabetes. DOI:10.1016/j.amjmed.2016.07.016 *The American journal of medicine* 08/2016.
89. Giovanni Benfari, R Dandale, A Rossi, F Onorati, G Mugnai, F Ribichini, Pier L. Temporelli, C Vassanelli: Functional mitral regurgitation: are we treating the real target? DOI:10.2459/JCM.0000000000000429 *Journal of Cardiovascular Medicine* 08/2016.
90. S Bonapace, A Rossi, MA Cicoira, G Targher, P Marino, Giovanni Benfari, G Mugnai, G Arcaro, C Vassanelli: Echocardiographically Derived Pulse Wave Velocity and Diastolic Dysfunction Are Associated with an Increased Incidence of Atrial Fibrillation in Patients with Systolic Heart Failure. *Echocardiography* 06/2016; DOI:10.1111/echo.13230
91. Giovanni Benfari, L Rossetti, A Rossi, GB Battista Luciani: Quadricuspid mitral valve: Of clefts, scallops, and indentations. *The Journal of thoracic and cardiovascular surgery* 04/2016; DOI:10.1016/j.jtcvs.2016.04.066
92. G Mugnai, Giovanni Benfari, A Fede, A Rossi, GB Chierchia, F Vassanelli, G Menegatti, FL Ribichini: Tpeak-to-Tend/QT is an independent predictor of early ventricular arrhythmias and arrhythmic death in anterior ST elevation myocardial infarction patients. 07/2015; *European Heart J ACC* DOI:10.1177/2048872615598616
93. A Fede, C Zivelonghi, Giovanni Benfari, G Pesarini, M Pighi, A Ferrara, A Piccoli, S Ariotti, V Ferrero, D Dalla Mura, M Battistoni, C Vassanelli, F Ribichini: iFR-FFR comparison in daily practice. DOI:10.2459/JCM.0000000000000272 *Journal of Cardiovascular Medicine* 06/2015.
94. G Mugnai, F Vassanelli, G Pasqualin, Giovanni Benfari, M Rebonato, G Pesarini, L Zanolla, G Menegatti, C Vassanelli: Dynamic changes of repolarization abnormalities in takotsubo cardiomyopathy. DOI:10.2143/AC.70.2.3073515 *Acta cardiologica* 04/2015; 70(2).
95. Giovanni Benfari, F Onorati, A Rossi, R Abbasciano, C Zivelonghi, A Salsano, F Ribichini, F Santini, F Vassanelli, A Mazzucco, G Faggian: Is TAVI superior to surgery in high-risk patients? Insight into the concept of individual risk assessment. *Minerva medica* 11/2014; 105(6).
96. G Mugnai, G Pasqualin, Giovanni Benfari, Livio Bertagnolli, Francesca Mugnai, Francesca Vassanelli, Giuseppe Marchese, Gabriele Pesarini, Giuliana Menegatti: Acute electrocardiographic differences between Takotsubo cardiomyopathy and anterior ST elevation myocardial infarction. DOI:10.1016/j.jelectrocard.2014.11.001 *Journal of Electrocardiology* 11/2014; 48(1).
97. A Rossi, R Dandale, S Nistri, P Faggiano, MA Cicoira, Giovanni Benfari, F Onorati, F Santini, DMessika-Zeitoun, M Enriquez-Sarano, C Vassanelli: Functional mitral regurgitation in patients with aortic stenosis: Prevalence, clinical correlates and pathophysiological determinants: A quantitative prospective study. DOI:10.1093/ehjci/jet269 *European Heart Journal Cardiovascular Imaging* 12/2013; 15(6).
98. A Pacchioni, A Rossi, Giovanni Benfari, MA Cicoira, P Pellegrini, S Bonapace, C Vassanelli: A higher body mass index is associated with reduced prevalence of unstable atherosclerotic plaque: A possible explanation of the obesity paradox. DOI:10.1016/j.ijcard.2013.03.107 *International journal of cardiology* 04/2013; 168(3).
99. Giovanni Benfari, A Rossi, R Dandale, M Toniolo, A Cristoforetti, F Ribichini, C Vassanelli: Prevalence of patients with severely reduced aortic valve area and low gradient despite a preserved ejection fraction. Results from a cath-lab data base. DOI:10.1016/j.ijcard.2012.11.098 *International journal of cardiology* 12/2012; 167(6).